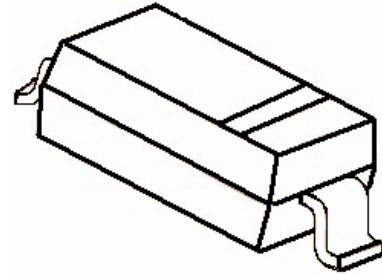


»Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction



SOD-123

»General Description

- Case: molded plastic
- Polarity: Color band denotes cathode
- Package: SOD-123 Plastic Package

» Maximum Ratings @ $T_A=25^{\circ}\text{C}$  unless otherwise noted

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	V
Working Peak Reverse Voltage	$V_{RWM}$	100	V
DC Blocking Voltage	$V_R$	100	V
Average Rectified Forward Current	$I_o$	75	mA
Forward Continuous Current	$I_F$	150	mA
Repetitive Peak Forward Current @ $t_p < 1.0\text{s}$ , Duty Cycle < 50%	$I_{FRM}$	350	mA
Non-repetitive Peak Forward Surge Current@ $t_p = 8.3\text{ms}$	$I_{FSM}$	750	mA
Power Dissipation	$P_d$	500	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	200	$^{\circ}\text{C}/\text{W}$
Operating Temperature Range	$T_j$	-40 to + 125	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to + 150	$^{\circ}\text{C}$

»Electrical Characteristics @ $T_A=25^{\circ}\text{C}$  unless otherwise noted

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	100			V
Forward Voltage Drop	$V_F$	$I_F = 0.1\text{mA}$			0.25	V
		$I_F = 10\text{mA}$			0.45	
		$I_F = 250\text{mA}$			1.00	
Peak Reverse Current	$I_R$	$V_R = 1.5\text{V}$			0.5	$\mu\text{A}$
		$V_R = 1.5\text{V}, T_j = 60^{\circ}\text{C}$			5.0	
		$V_R = 10\text{V}$			0.8	
		$V_R = 10\text{V}, T_j = 60^{\circ}\text{C}$			7.5	
		$V_R = 50\text{V}$			2.0	
		$V_R = 50\text{V}, T_j = 60^{\circ}\text{C}$			15	
Total Capacitance	$C_T$	$V_R = 0\text{V}, f = 1\text{MHz}$		10		pF
		$V_R = 1\text{V}, f = 1\text{MHz}$		6.0		

»Typical Performance Characteristics (T<sub>J</sub> = 25 °C, unless otherwise noted)

Fig.1 Power Derating Curve

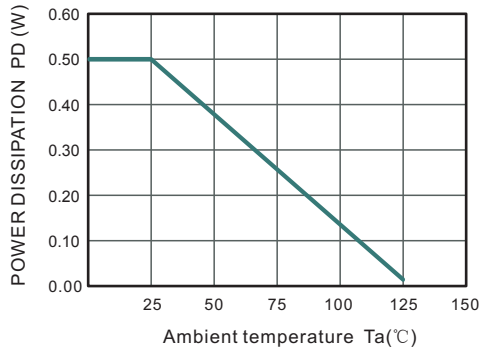


Fig.2 Typical Reverse Characteristics

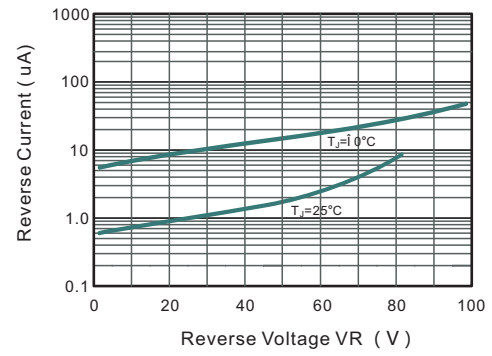


Fig.2 TYPICAL FORWARD VOLTAGE

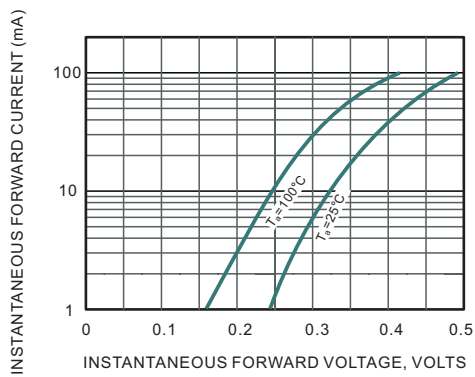
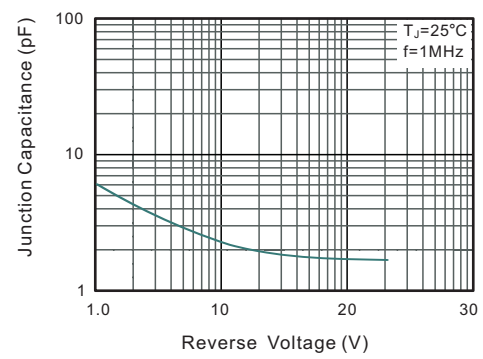
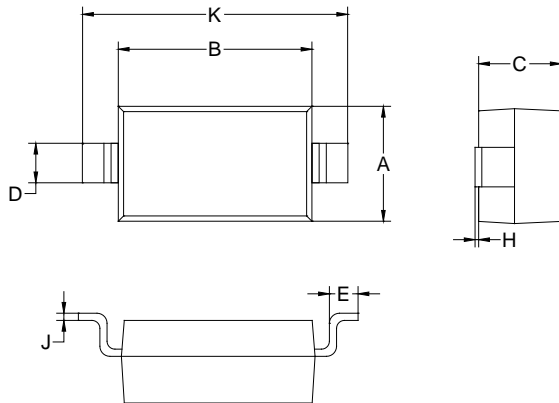


Fig.3 Typical Junction Capacitance



»Package Information

SOD-123



SOD-123		
Dimension	Min.	Max.
A	1.50	1.70
B	2.60	2.80
C	1.05	1.25
D	0.45	0.65
E	0.25	0.45
H	0.02	0.10
J	0.05	0.15
K	3.55	3.85

»Ordering information

Order code	Package	Marking	Base qty	Delivery mode
BAT46W	SOD-123	S9	3K	Tape and reel